

Galaxy Forum South America 2020 Argentina

Precession, Constellations, Epochs, and Astronomy from the Moon



History of Constellations and Uranometría Argentina

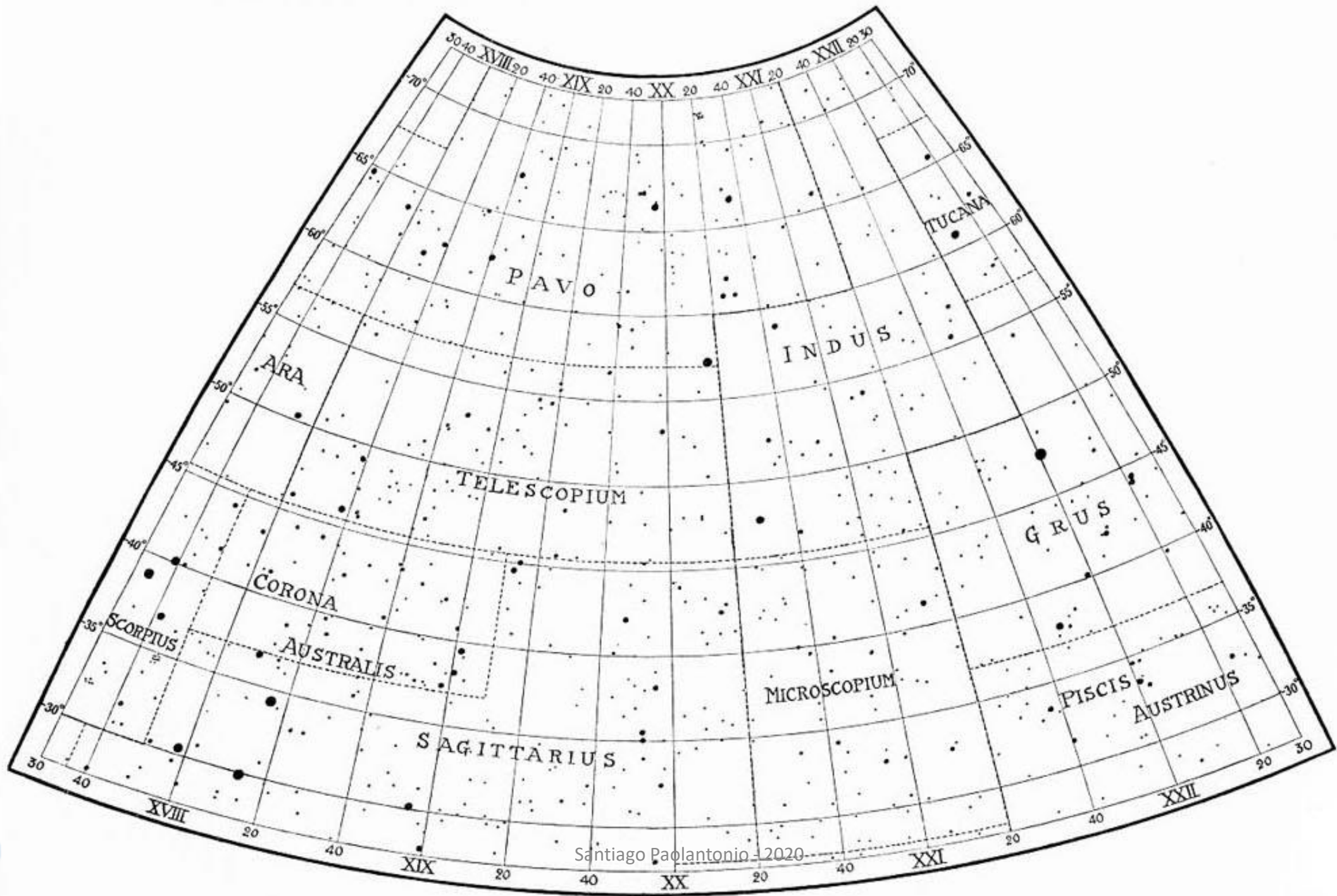
Santiago Paolantonio

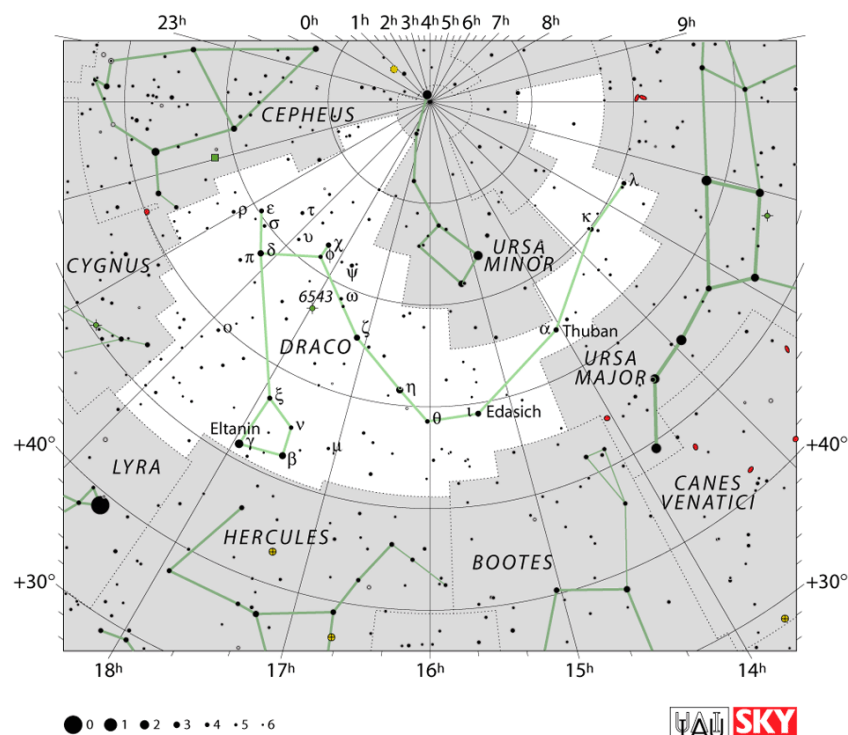
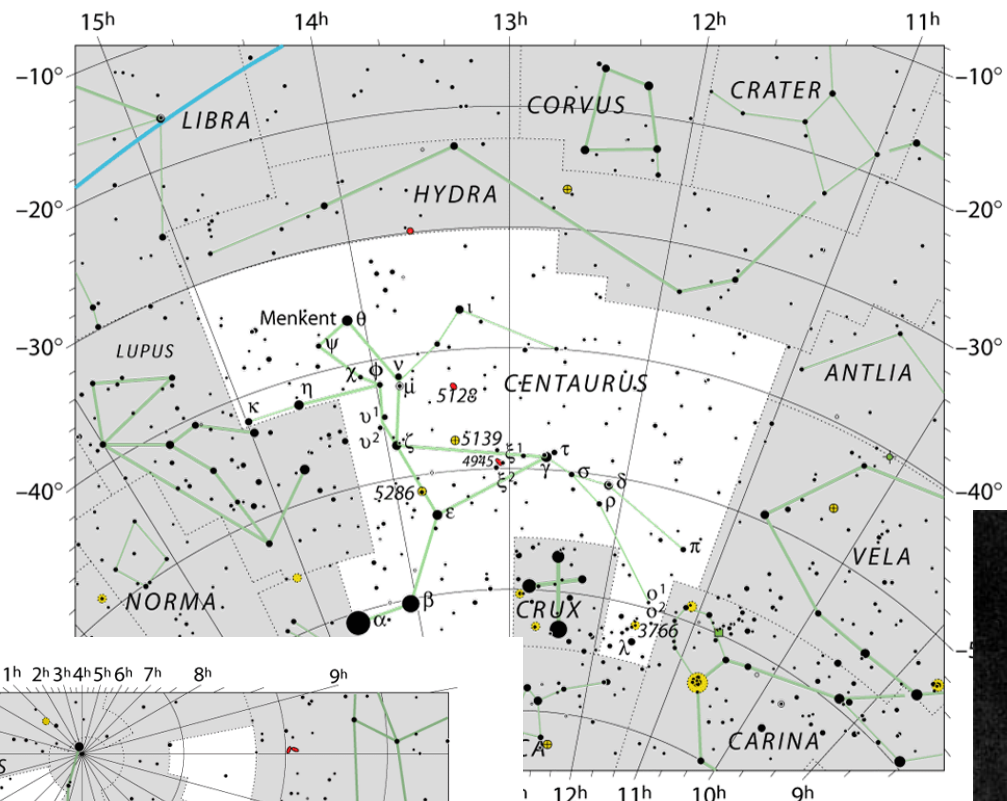
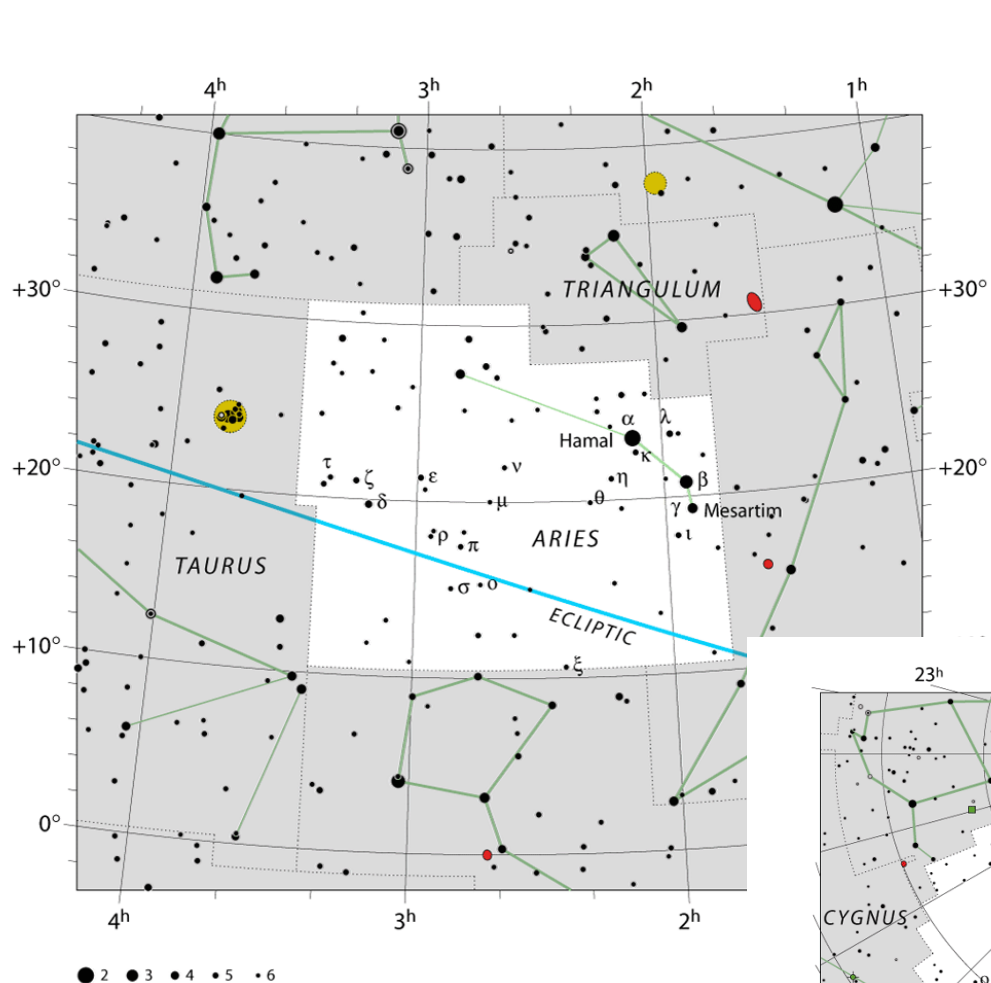


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Santiago Paolantonio - 2020

Alex Cherney © 2011
www.terraastro.com



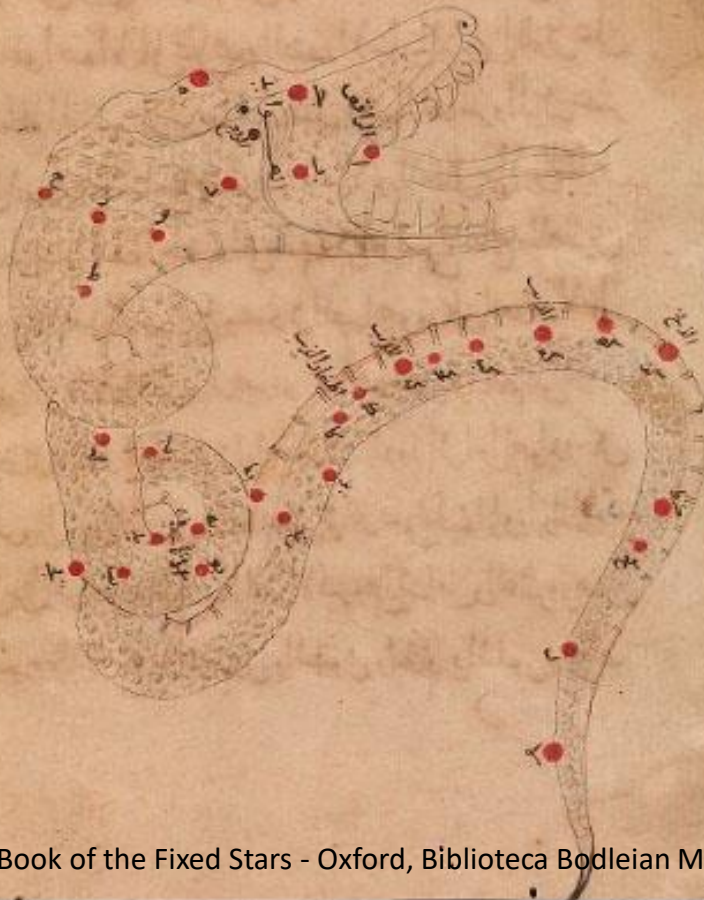


Eugène J. Delporte
(1882-1955)
Flammarion, 1956

4

من

على ذنبه وذكره أيضا بالسماج والظن ان راسها مثل رأس
الخنخال من غير ان عرفه شيئا منها كالأقارب بعد هذه الأربعة
وبينها ومن العوايز الدبران وغيرهما من كواكب السنين
كوكب السنين على ما وصفه في الشرح

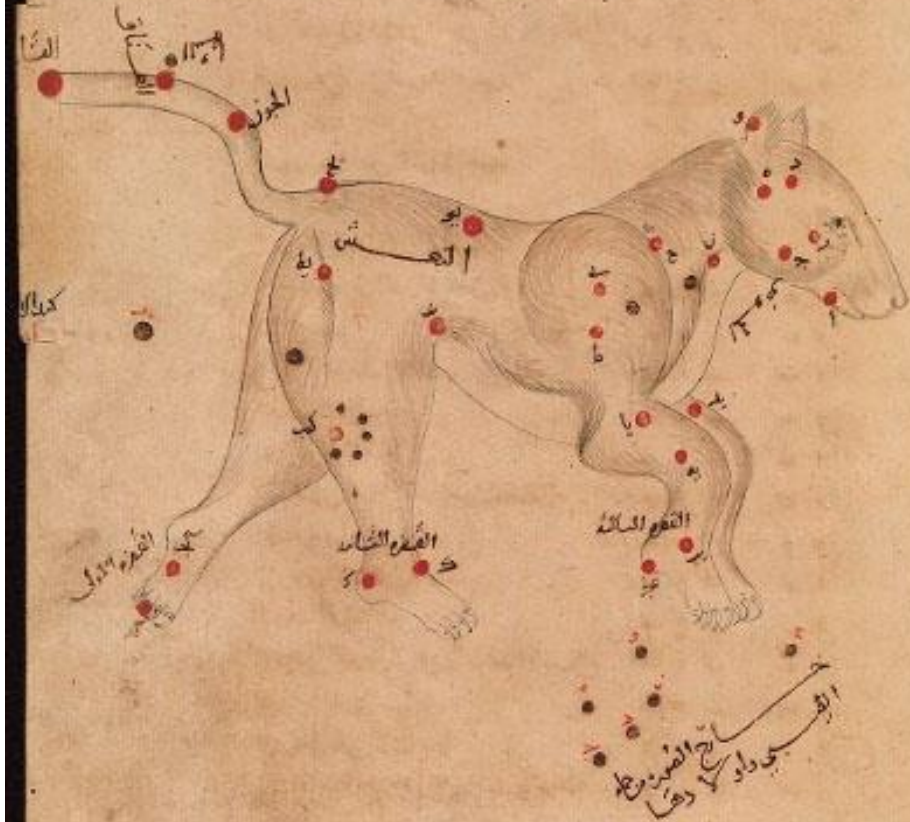


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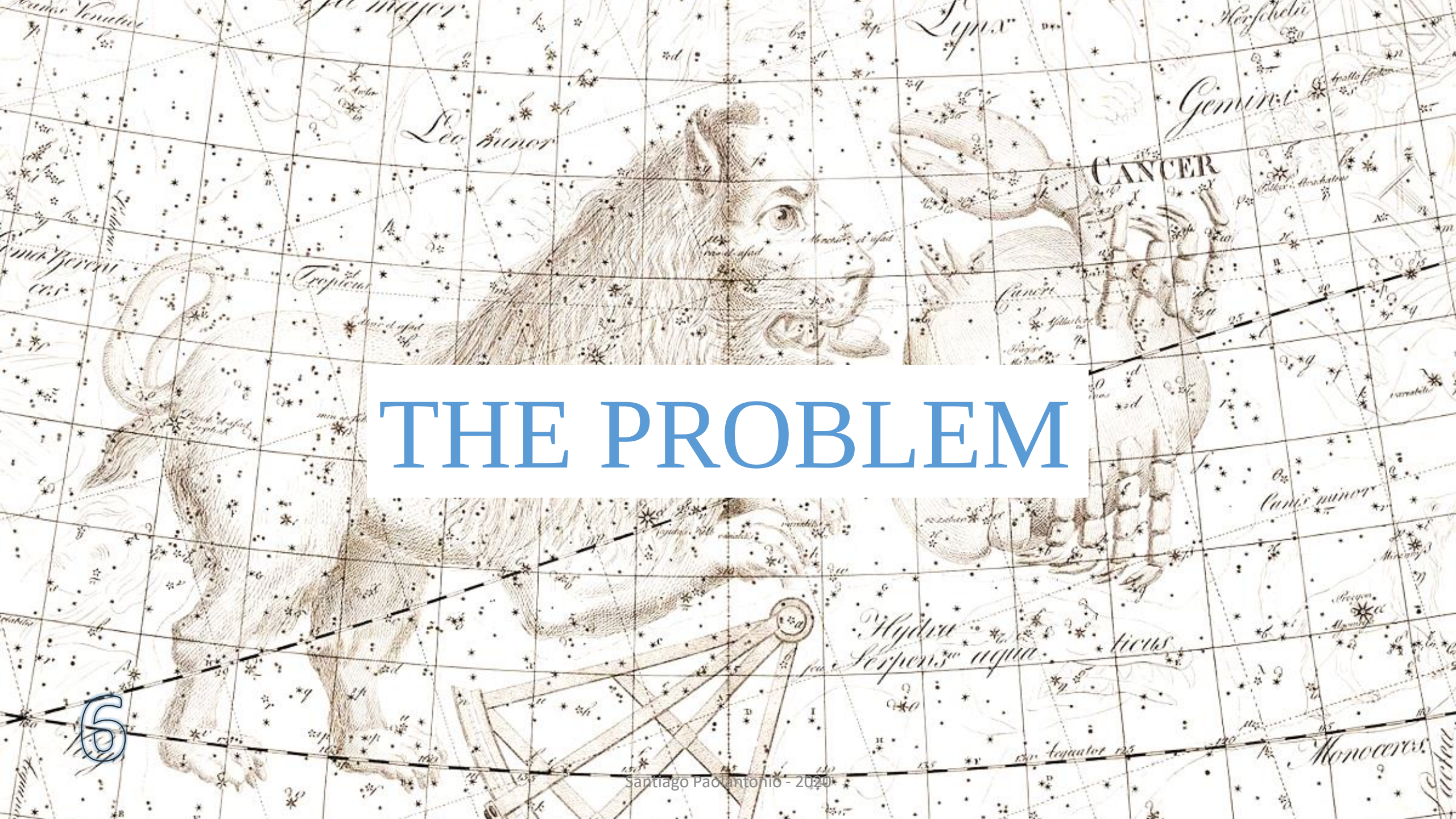
Al-Sufi's Book of the Fixed Stars - Oxford, Biblioteca Bodleian MS

من

صورة الدلت الأكبر على ما يرى في السماء



Al-Sufi's Book of the Fixed Stars - Oxford, Biblioteca Bodleian MS



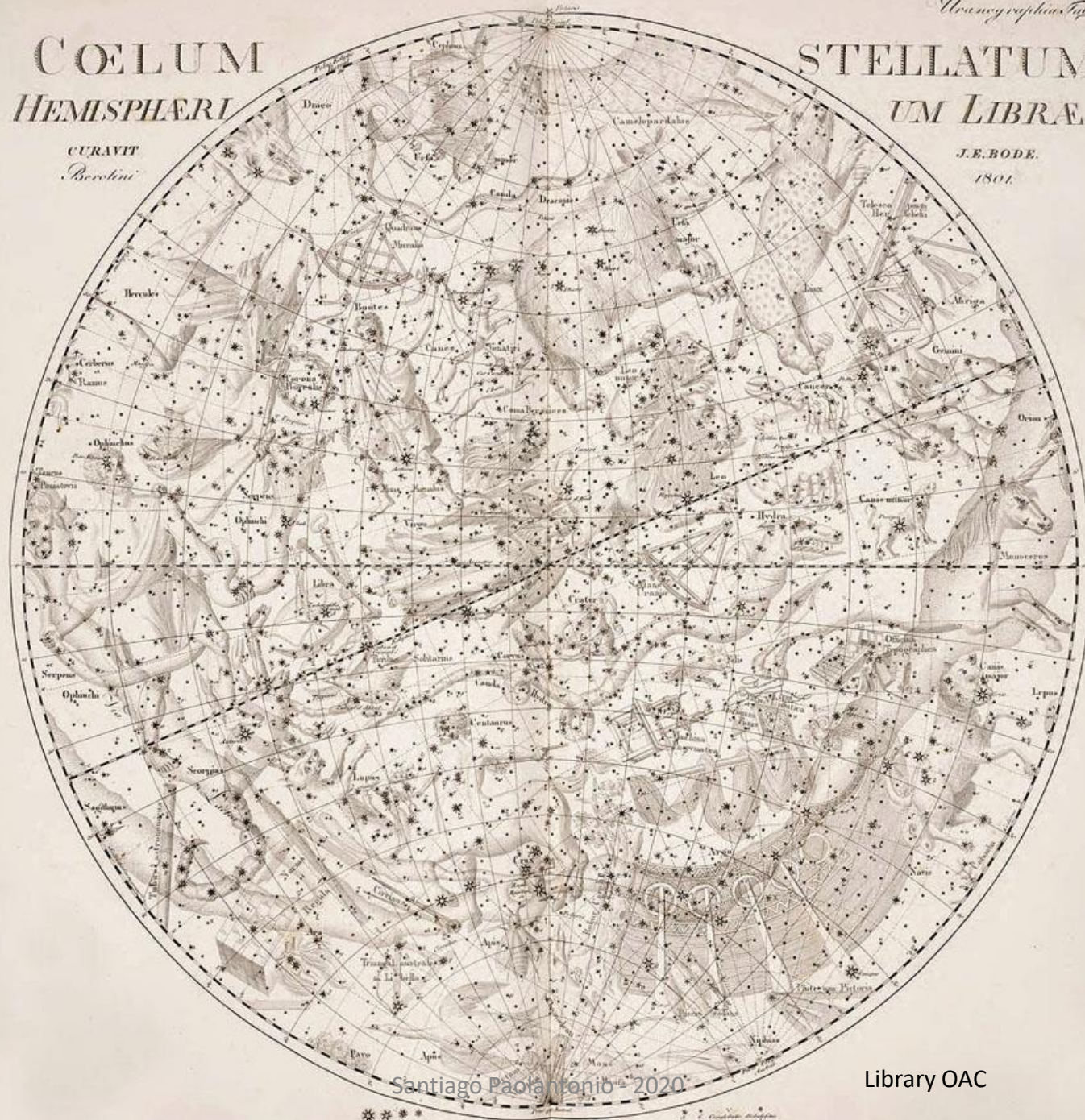
THE PROBLEM

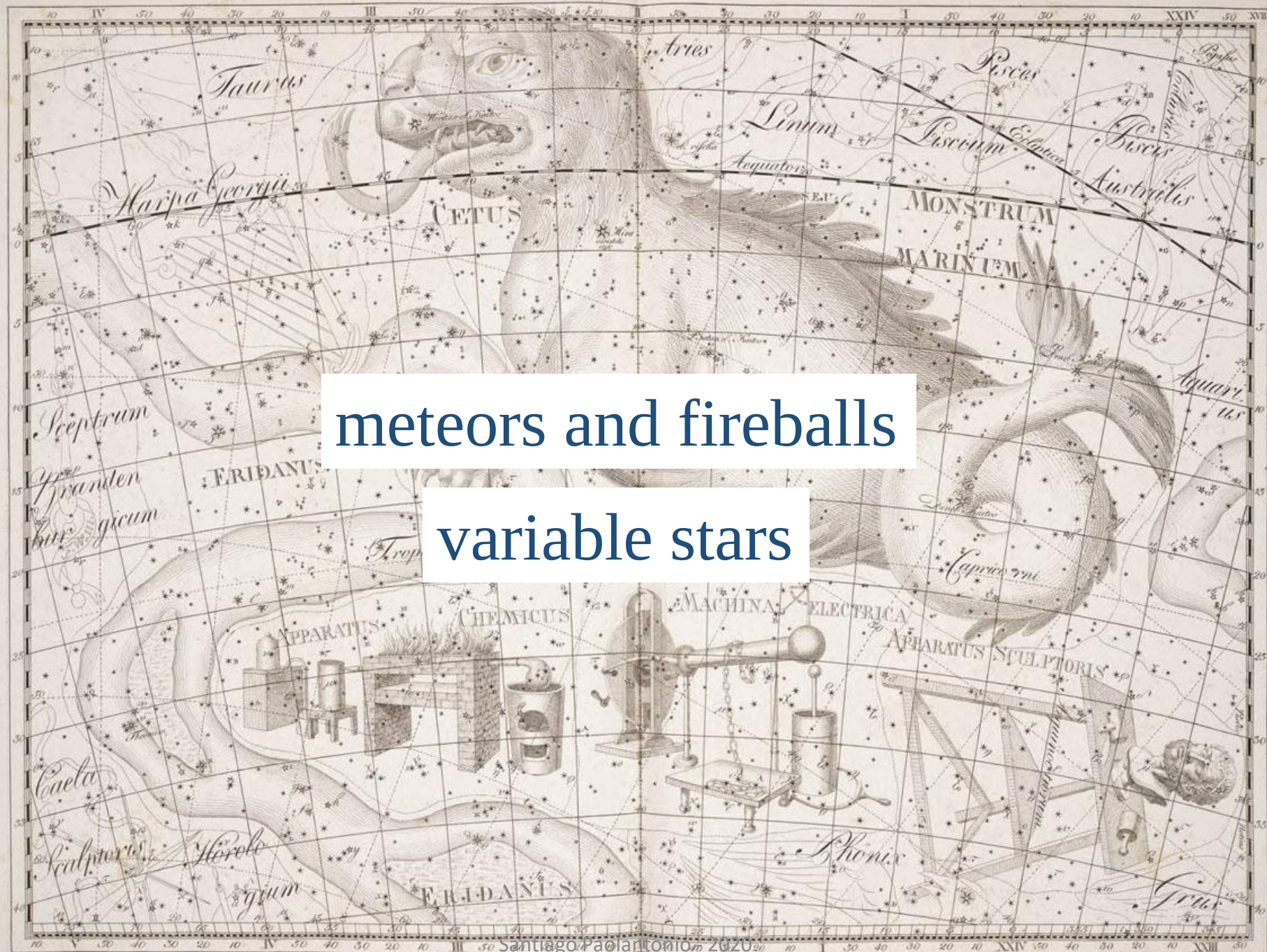
COELUM
HEMISPHERI

CURAVIT
Becklin

STELLATUM.
UM LIBRÆ.

J.E.BODE.
1801.







THE SOLUTION



Eugène J. Delporte
(1882-1955)
Flammarion, 1956



The atlas of the Uranometría Argentina
Córdoba Astronomical Observatory Library

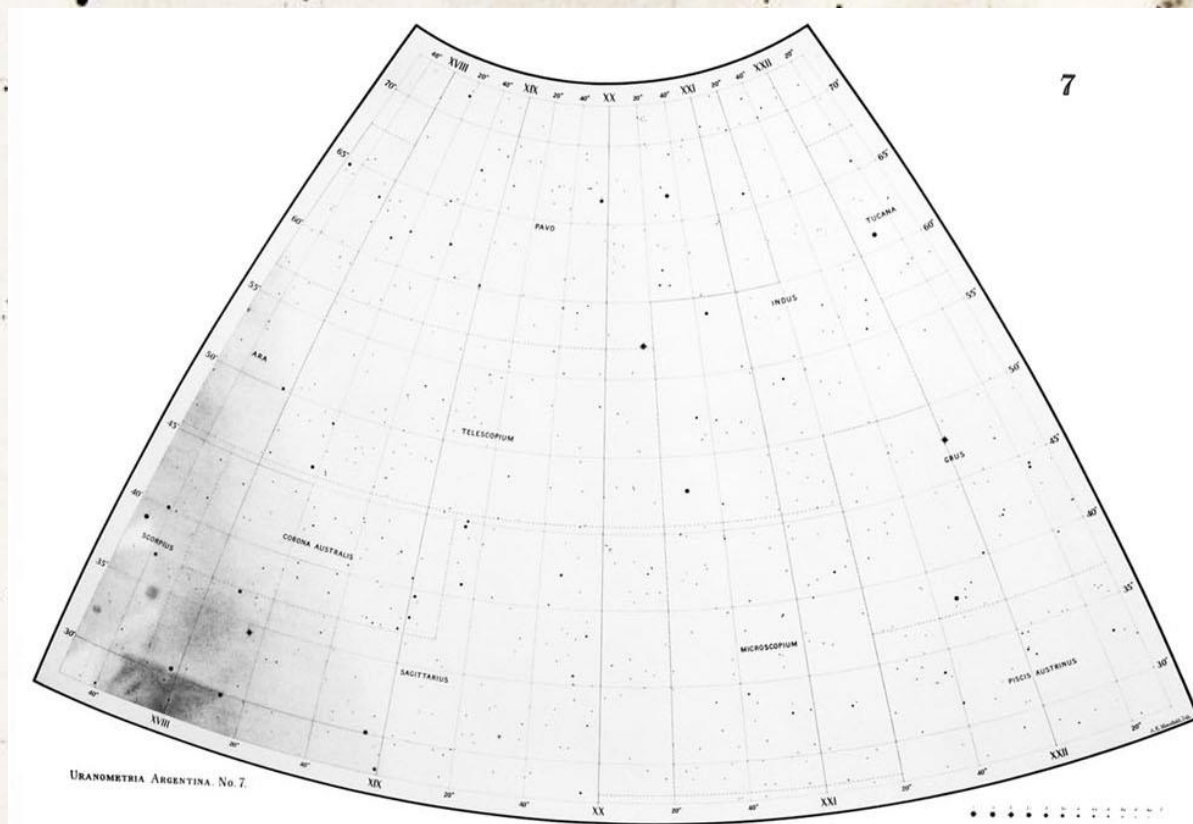
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Uranometría Argentina

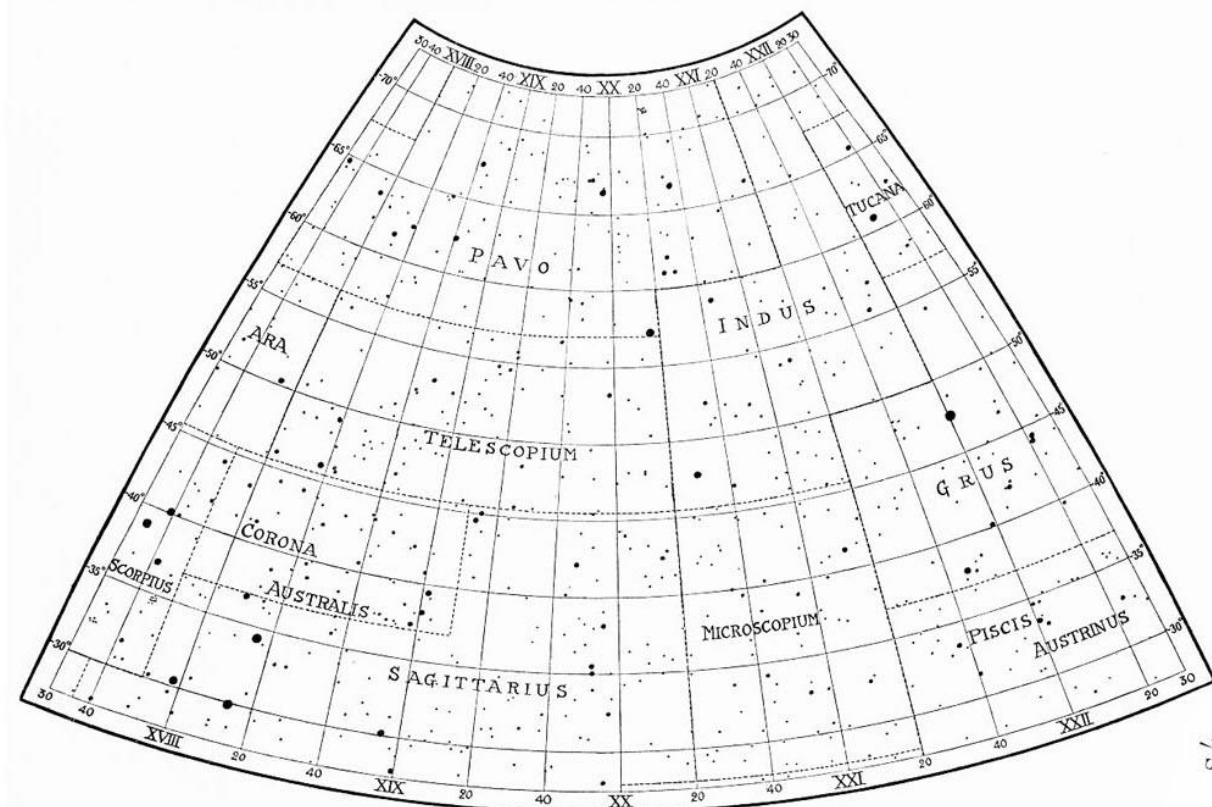
Objetives:

- ✓ unifying the stellar denominations
- ✓ solving a proposal of the limits of the constellations
 - used arcs of right ascension circles and parallels of declination
 - choosing them in such a way that they did not deviate too much from those used in the most important atlas of the time, and minimizing the changes of belonging of the stars to the constellations.

The magnitude scale was extended to 7th



Uranometria Argentina 1877



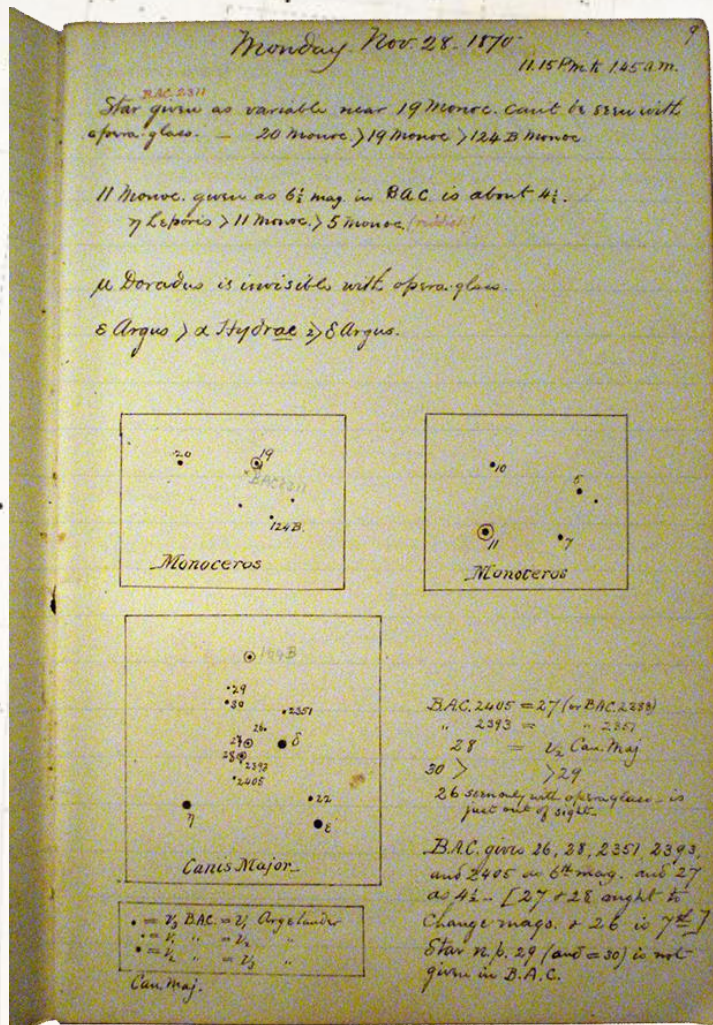
Delporte 1930

Equinox 1875.0

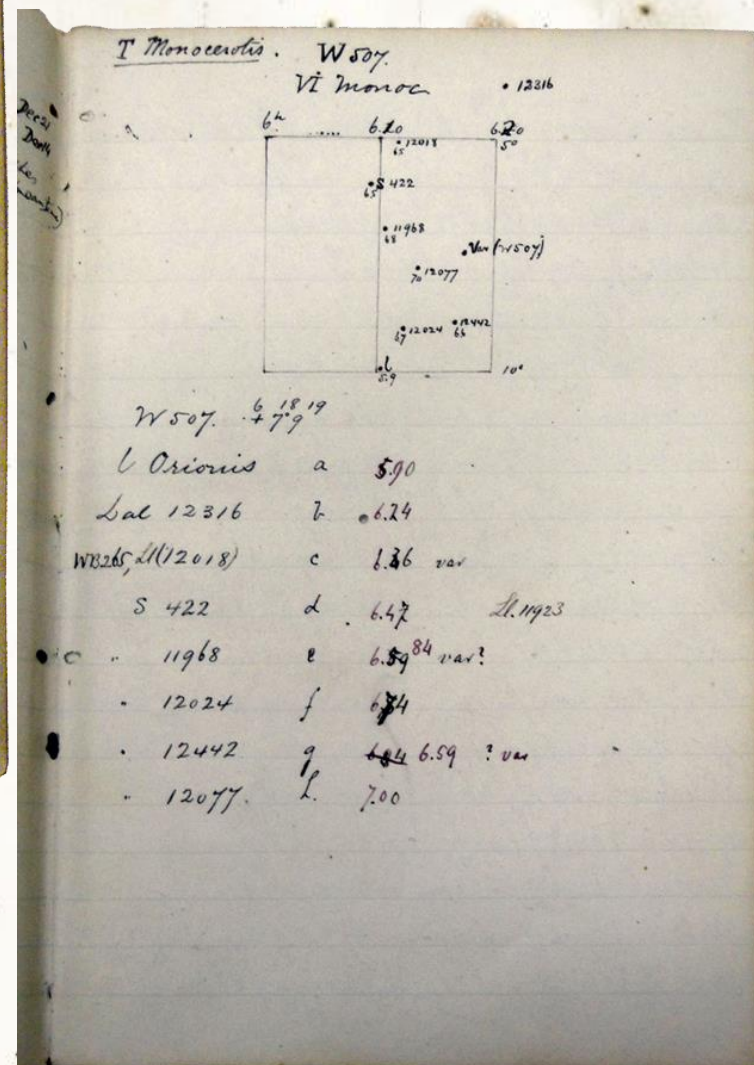
Santiago Paolantonio - 2020

Córdoba Astronomical Observatory Library

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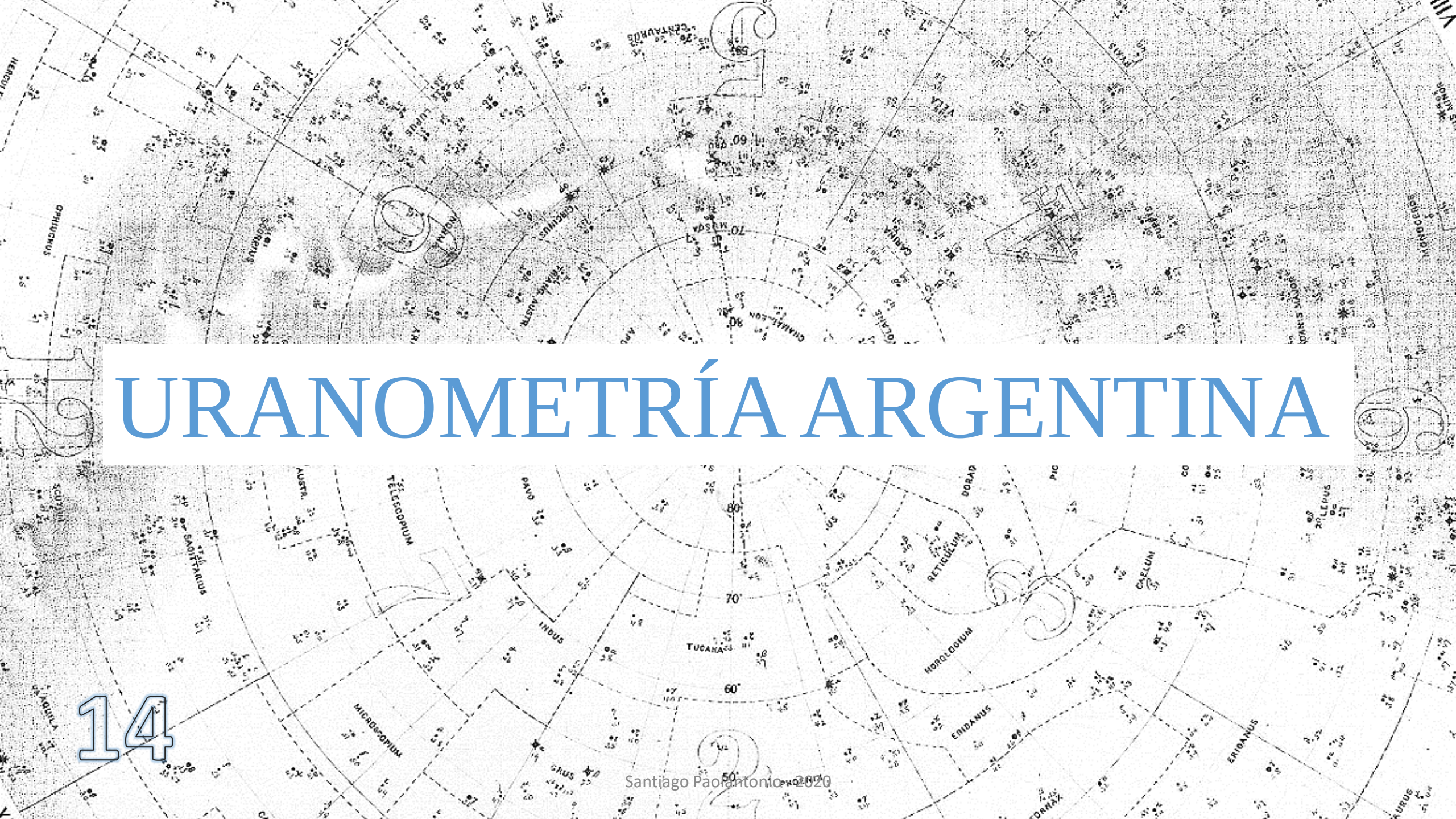


Original notebook for the Uranometría Argentina and variable star list Córdoba Astronomical Museum



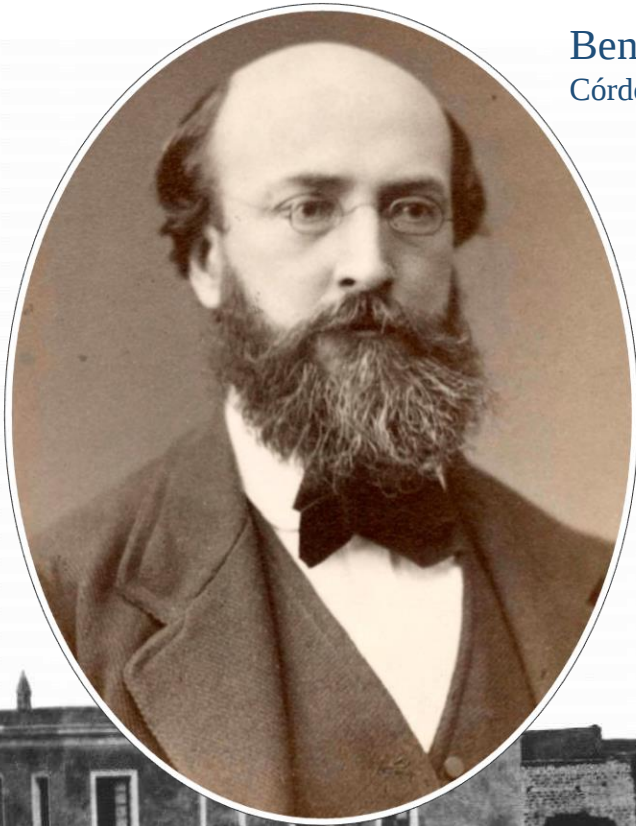
Nu Fornacis	V376 Puppis	GT Muscae	V2368 Ophiuchi
X Tauri	NSV 3708	V Hydrae	U Ophiuchi
R Doradus	T Puppis	T Carinae	RS Sagittarii
R Eridani	NSV 4389	Epsilon Muscae	V4028 Sagittarii
S Eridani	NSV 4492	R Sculptoris	Kappa Pavonis
V1085 Orionis	N Velorum	R Muscae	V4198 Sagittarii
CI Orionis	R Carinae	EP Virginies	V5548 Sagittarii
V1377 Orionis	l Carinae	Theta Apodis	V4438 Sagittarii
NSV 2918	R Velorum	R Apodis	Rho Pavonis
T Monocerotis	R Antliae	CU Virginies	Epsilon Pegasi
NSV 3234	S Carinae	R Centauri	DQ Gruis
NSV 3285	V337 Carinae	T Trianguli Australi	IOTA Phoenixis
V637 Monocerotis	LX Velorum	R Trianguli Australi	TX Piscium
Sigma Canis Majoris	U Antliae	Delta Lupi	HH Pegasi
OU Puppis	U Hydrae	R Normae	AL Sculptoris
L2 Puppis	V429 Carinae	S Trianguli Australi	NSV 13
U Monocerotis	V519 Carinae	KHI Ophiuchi	

Variable star list S. Paolantonio 2013



URANOMETRÍA ARGENTINA

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Benjamin A. Gould (1824 - 1896)
Córdoba Astronomical Observatory Library

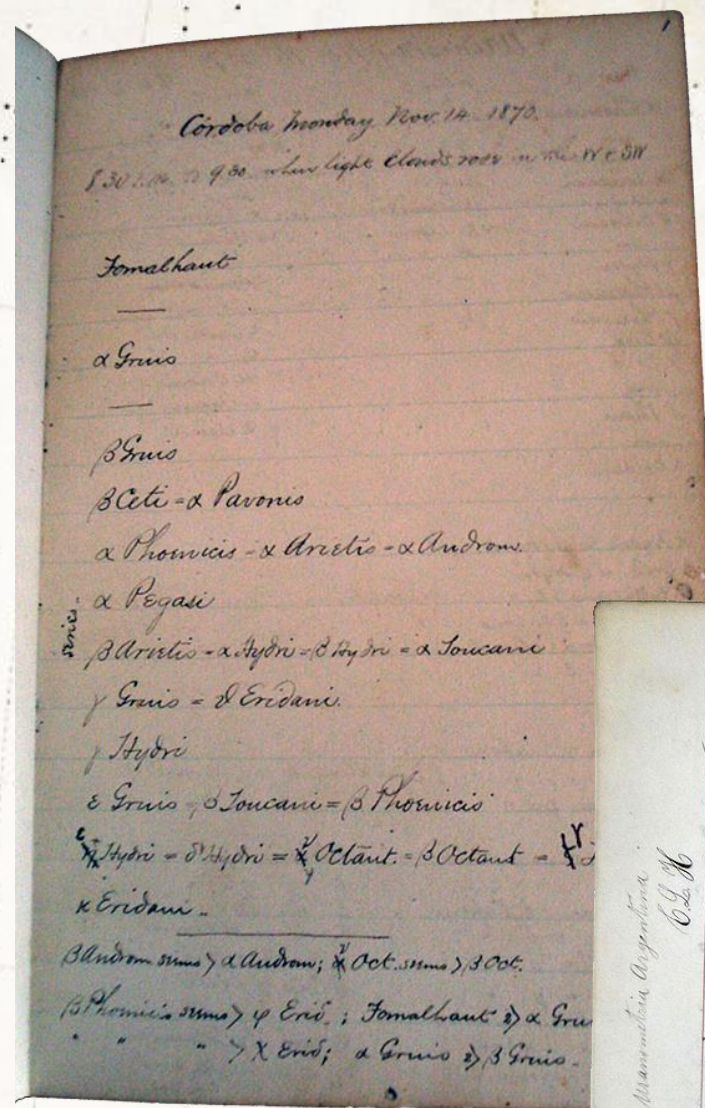


Friedrich W. A. Argelander
(1799 - 1875)
Universität Bonn

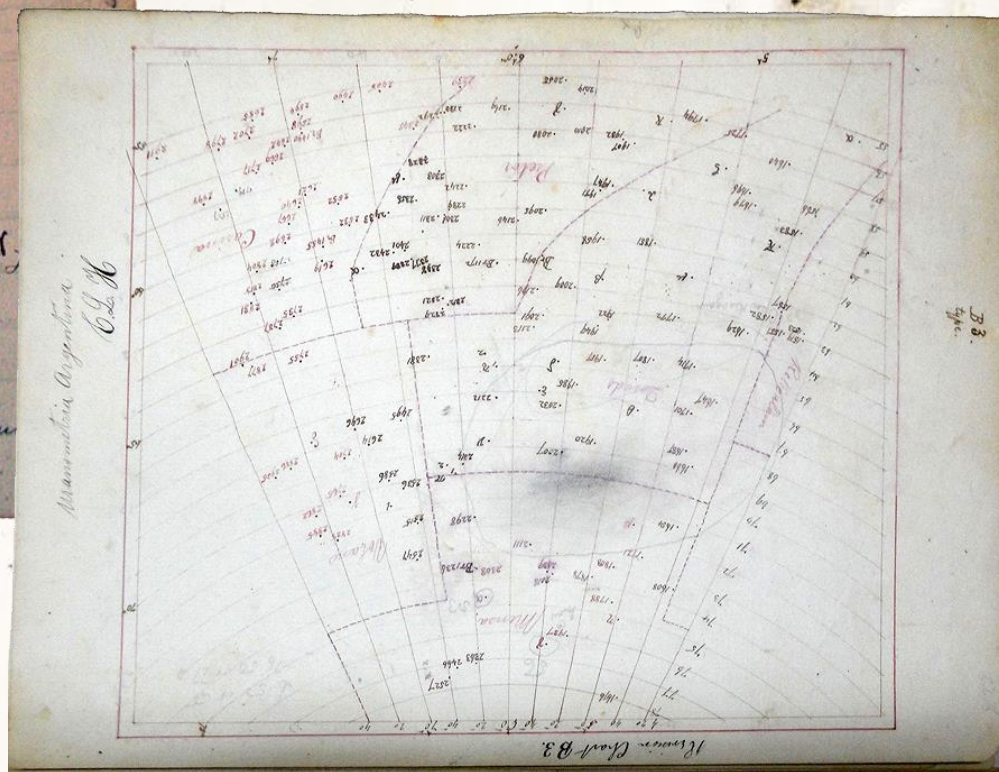


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Argentine National Observatory,
October 24, 1871.
Córdoba Astronomical Observatory Library



Original notebooks for the
 Uranometría Argentina.
 First observation on
 November 14, 1870.
 Córdoba Astronomical Museum



Williams Morris Davis (1850-1934). UC Santa Barbara.
 Department of Geography

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HERCULES

SAGITTARIUS

CAPRICORN

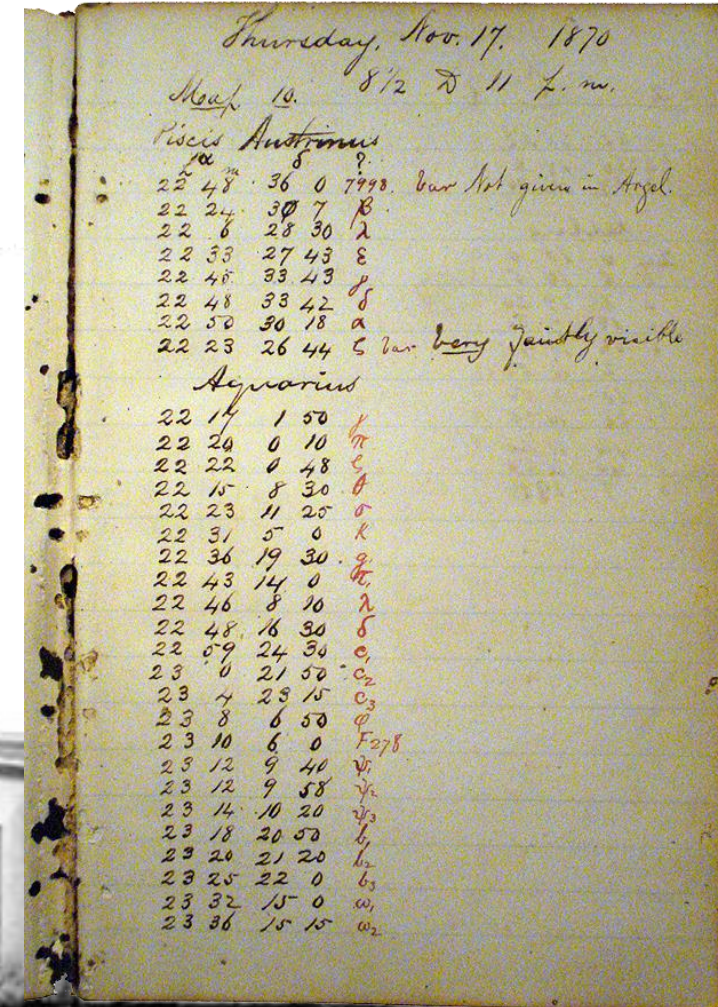
AQUILA

Santiago Paolantonio - 2020

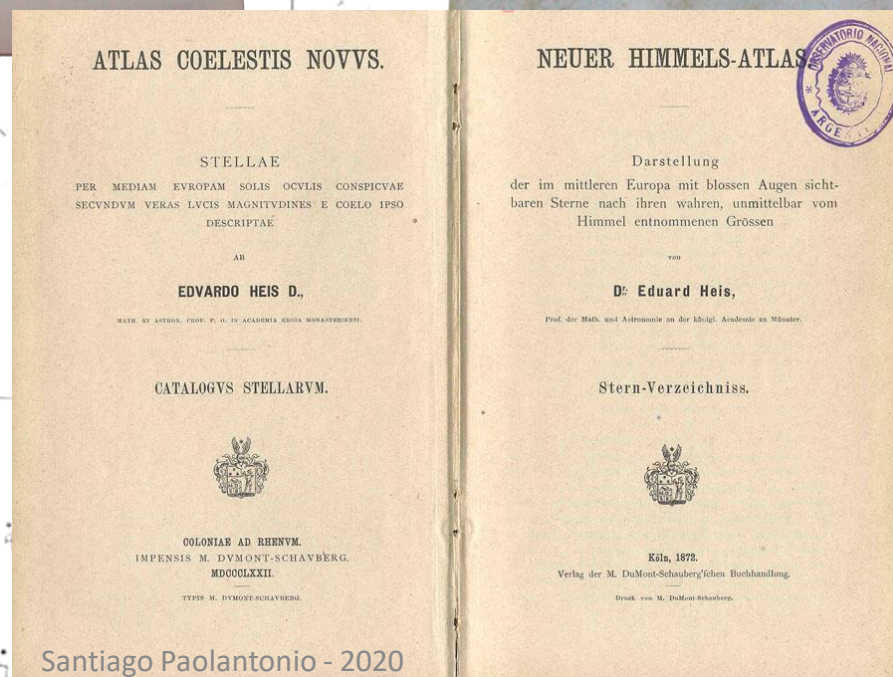
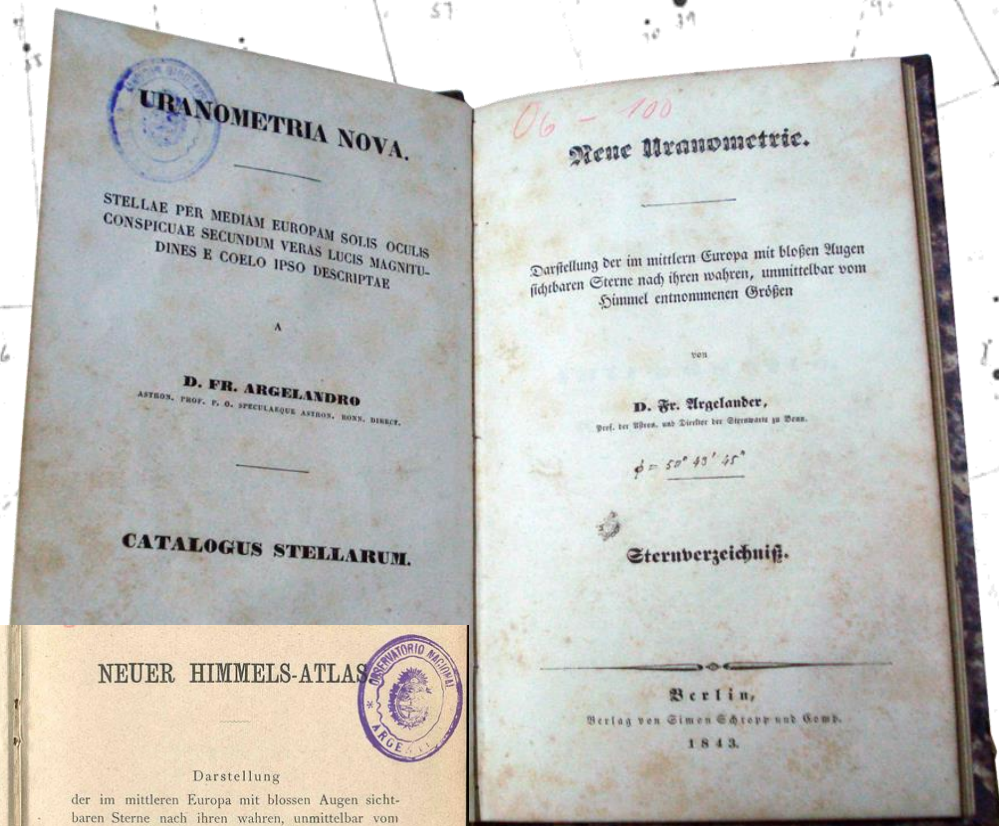
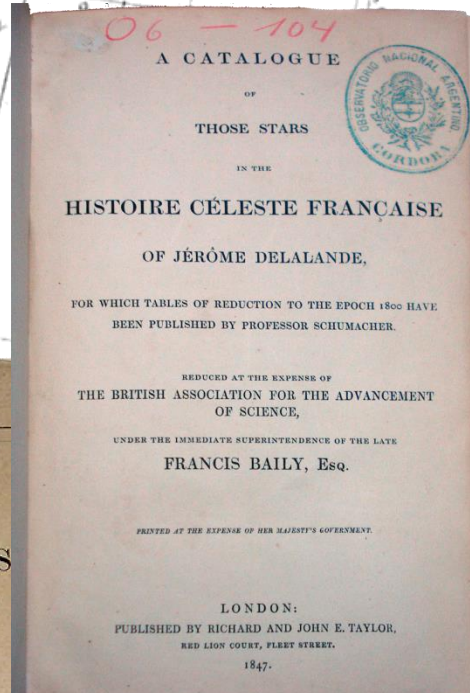
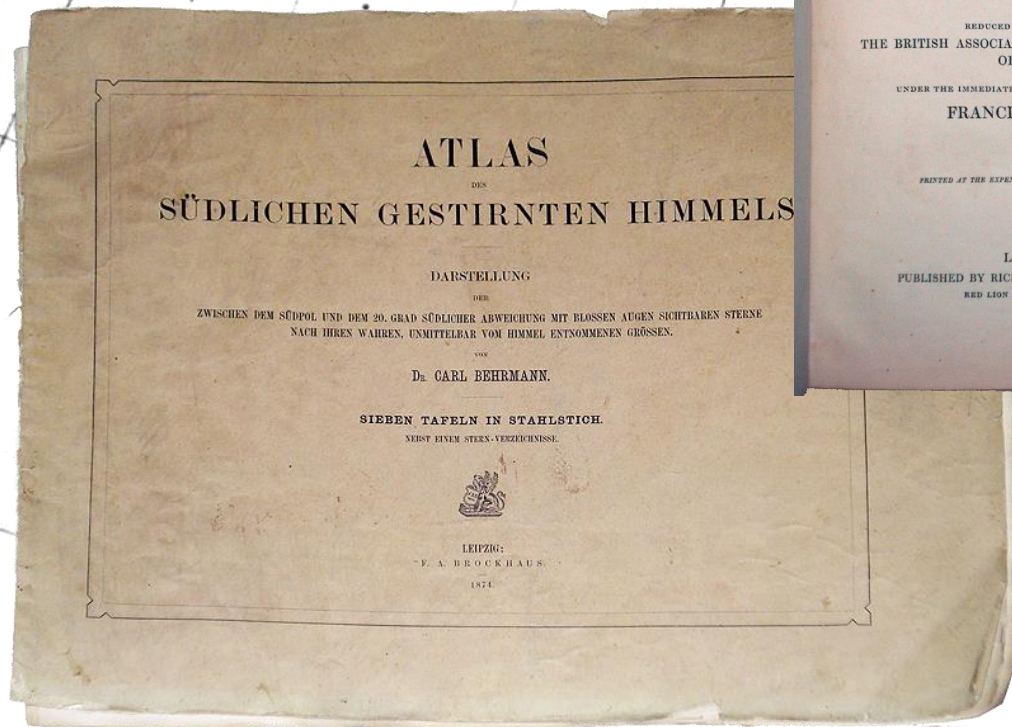


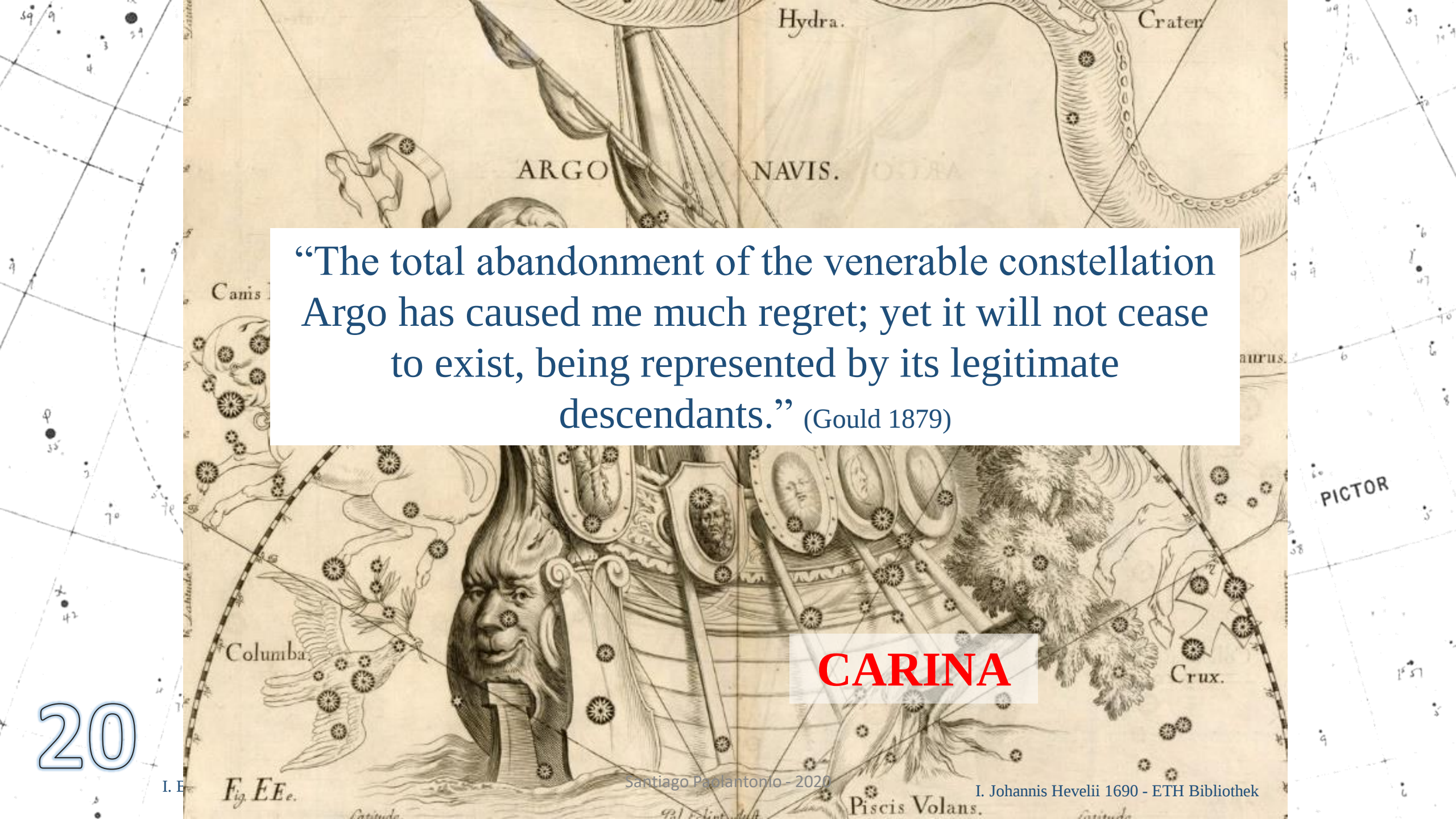
John (Juan) Macon Thome
(1843 - Palmyra, 1908 - Córdoba)
Córdoba Astronomical Museum

Original notebooks, first
observation made by Thome,
November 17, 1870
Córdoba Observatory Museum



“... I have essayed a simplification of the nomenclature and a reformation of the existing boundaries; earnestly hoping that, whatever may be the verdict of astronomers as to the measure of tact or judgment employed, they may at least recognize in every modification a strong desire to avoid new sources of confusion while diminishing the existing ones.” (Gould 1879)





“The total abandonment of the venerable constellation Argo has caused me much regret; yet it will not cease to exist, being represented by its legitimate descendants.” (Gould 1879)

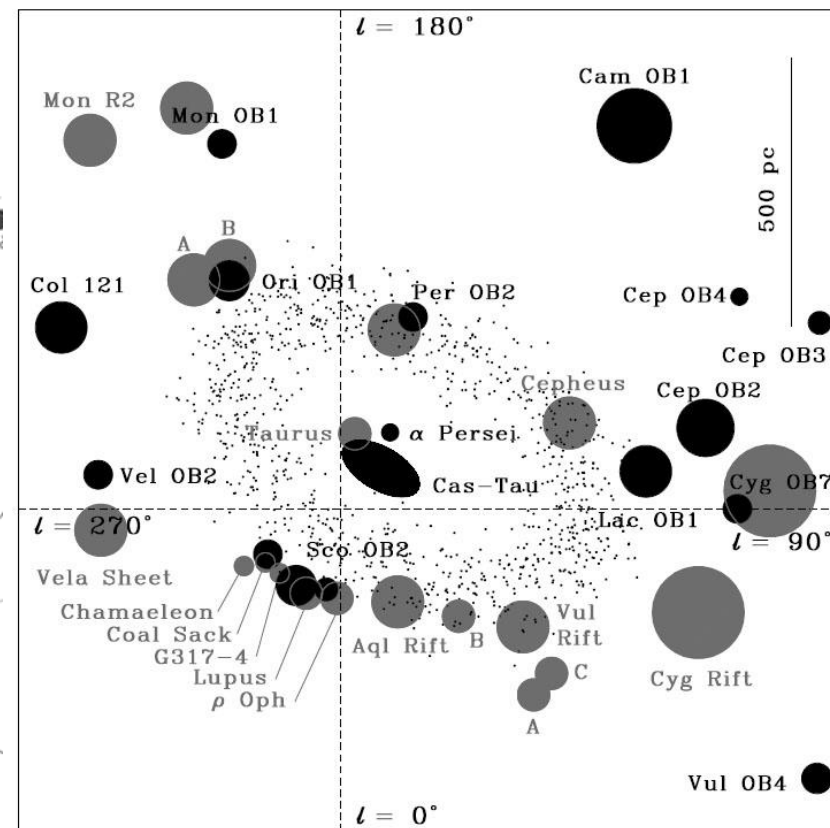
CARINA

Base Mapa 14 Uranometria Argentina, 1877

Gould Belt



Credit: 2MASS/J. Carpenter, T. H. Jarrett, & R. Hurt





Atlas 1877

13 maps de 50 x 70 cm

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South Pole - $+10^{\circ}$

Santiago Paolantonio - 2020



Catalog 1879

400 pages

7755 stars (7ma)

707 stars ($>7ma$)

URANOMETRIA ARGENTINA

BRILLANTEZ Y POSICION

DE LAS ESTRELLAS FIJAS, HASTA LA SÉPTIMA MAGNITUD,

COMPRENDIDAS

DENTRO DE CIENTO GRADOS DEL POLO AUSTRAL,

POR

BENJAMIN APTHORP GOULD.

CON ATLAS



BUENOS AIRES

IMPRESA DE PABLO E. CONI, ESPECIAL PARA OBRAS

80 - CALLE ALMENA - 80

1879

URANOMETRIA ARGENTINA

BRIGHTNESS AND POSITION

OF EVERY FIXED STAR, DOWN TO THE SEVENTH MAGNITUDE,

WITHIN

ONE HUNDRED DEGREES OF THE SOUTH POLE,

BY

BENJAMIN APTHORP GOULD.

WITH AN ATLAS

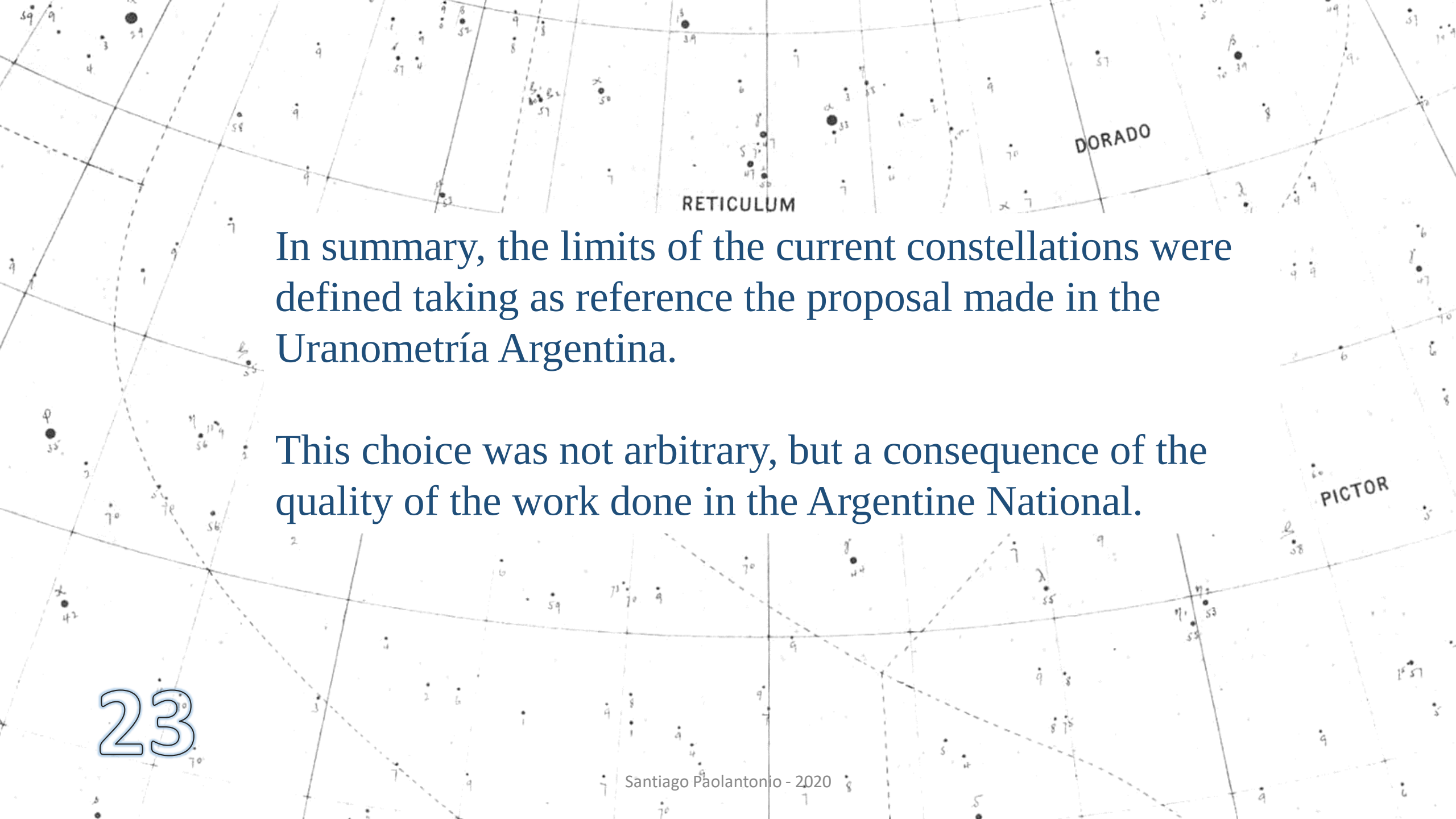


BUENOS AIRES

PRINTED BY PAUL EMILE CONI

80 - CALLE ALMENA - 80

1879



In summary, the limits of the current constellations were defined taking as reference the proposal made in the Uranometría Argentina.

This choice was not arbitrary, but a consequence of the quality of the work done in the Argentine National.



Thank you

Acknowledgements

Beatríz García

David Merlo

Néstor Camino

Córdoba Observatory Museum

Córdoba Observatory Library



References

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- Gould, B. A. (1879). Uranometría Argentina, Catálogo y Atlas (1877). Posiciones y brillos de 7756 estrellas más brillantes que magnitud 7.0, ubicadas dentro de los 100° del polo sur (1875.0). Resultados del Observatorio Nacional Argentino, Vol. I. Buenos Aires: Imprenta de Pablo Emile Coni.
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 - Catalog <http://adsabs.harvard.edu/abs/1879RNAO....1....1G>
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<https://historiadelaastronomia.wordpress.com/documentos/contelacionesyua/>